Pediculosis
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Pediculosis

Overview[1,2]

For a complete description of pediculosis, refer to the following texts:

- Control of Communicable Diseases Manual (CCDM).
- Red Book, Report of the Committee on Infectious Diseases.

Case Definition

Clinical description

Pediculosis is an infestation of the scalp and hair with lice nits (eggs), larvae, or adult lice. The crawling stages of this insect feed on human blood which can result in intense itching. Head lice are host specific and lice infestation of man is called: *Pediculosis humanus capitis* (the head louse).

Head lice are small, parasitic insects that cause an infestation of the hair and scalp with nits, larvae, or adult lice. The nits hatch in 7 days and begin to reproduce 8 to 10 days later. The nits depend upon body warmth to incubate, so they attach to a hair shaft by a sticky substance close to the scalp. The adult lice require a blood meal every 4 to 5 hours. Adult head lice and nits localize primarily behind the ears and just above the hairline near the nape of the neck. However, the entire scalp, eyebrows, eyelashes, and even the beard may be involved. Bites from this insect cause intense itching. Itching is caused by a reaction between the louse's saliva and the scalp. Scratching leads to excoriations and secondary bacterial infections may occur.

Laboratory criteria for diagnosis

None required.

Case classification

Confirmed: A clinically compatible case with evidence of live lice or viable nits.

Information Needed for Investigation

- **Verify the diagnosis**. Visual inspection of the hair for nits (eggs), and scalp for larvae or adult lice.
- **Establish the extent of illness**. Household and close contacts should have their scalp and hair checked for head lice and nits.
- **Contact the District Communicable Disease Coordinator** if an outbreak is **suspected** in a long-term health care facility.
- **Contact Bureau of Child Care** if cases are associated with a child care facility.

Case/Contact Follow Up And Control Measures

Determine the source(s) of infection.

- Identify other cases that are epidemiologically linked by time, place, and person.
- If an institution is involved, notify the appropriate administrative authorities.
- Initiate concurrent treatment for all cases and close contacts with obvious head lice or viable nits (pediculocide product and removal of all nits).
- Enhance the surveillance activities in the institution or the community to identify additional cases.
- Initiate contact isolation for all cases until effective treatment has been completed.
- Encourage child care facilities and school systems to adopt and enforce a "No Nit Policy".
- Bedding, headwear, shirts/coats (especially with collars), and other items of potential transmission should be either: 1) laundered in hot water (130°F) and dried in a hot dryer for at least 10 minutes (if clothes are clean, just place in hot dryer), 2) dry cleaning (for non-washable clothing and pillows), or 3) for items that can be neither washed nor dry cleaned place them in a plastic bag for ten days. Combs and hair brushes can be washed with a pediculocide shampoo or soaked in hot water (130°F). [4,5]
- Since nits hatch in 7 days and reproduce in 8 to 10 days, or if symptoms re-appear, follow product instruction regarding follow-up treatment (re-shampooing and combing).

Control Measures

See the Pediculosis and Phthiriasis section of the Control of Communicable Diseases Manual (CCDM), "Control of patient, contacts and the immediate environment".
See the Pediculosis section of the Red Book.

Laboratory Procedures

None.

Reporting Requirements

Outbreaks of pediculosis shall be reported to the local health authority or to the Missouri Department of Health (MDOH) within 3 days of first knowledge or suspicion by telephone, facsimile or other rapid communication.

1. Confirm the presence of a pediculosis outbreak.
2. Complete an outbreak report from.
3. Entry of appropriate information into the outbreak form in the MOHSIS database will satisfy item 2 of this section.
4. Send the completed form to the District Communicable Disease Coordinator.

References

1. Chin, James, ed. "Pediculosis and Phthiriasis." Control of Communicable Diseases Manual. 17th ed. Washington, DC: American Public Health Association, 2000: 372-374.
2. American Academy of Pediatrics. "Pediculosis." In: Peter G, ed. 1997 Red Book: Report of the Committee on Infectious Diseases. 24th ed. Elk Grove Village, IL. 1997: 387-390.
3. Wilson, B. B. and Weary, P. E. "Lice (Pediculosis)." Principles and Practice of Infectious Diseases. 3rd ed. Eds. Gerald L. Mandell, R. Gordon Douglas, and John E. Bennett. New York: Churchill Livingstone, 1990: 2163-2165.
4. "Head Lice, Pubic Lice (Pediculosis). Untitled Document. 16 March 1999. <http://www.mtholyoke.edu/offices/health/licemhc.html> (22 Sept. 1999).
5. Wayne Wolfram. "Lice." Lice. 3 November 1998. <http://www.emedicine.com/EMERG/topic298.htm> (22 Sept. 1999).

Other Sources of Information

1. "Head Lice (Pediculosis) Fact Sheet." Disease Fact Sheet-Pediculosis (Head Lice). 23 March 1998. <http://www.boco.co.gov/health/pedicu.htm> (22 Sept. 1999).
2. "Guidelines For The Prevention And Control Of Pediculosis." Head Lice Control. 17 February 1998. <http://www.hcs.k12.sc.us/health/hdlice.htm> (22 Sept. 1999).
3. "Pediculosis." Headlice. 1 February 1999. <http://www.ocontofalls.k12.wi.us/nurse/headlice.html> (22 Sept. 1999).

Web Site

National Pediculosis Association, Inc. www.headlice.org (22 Sept. 1999)

Pediculosis (Head Lice)

Fact Sheet

What is pediculosis?

Pediculosis is an infestation of the scalp and hair of the head with live larvae or adult head lice or nits (eggs). The crawling stages of the insect feed upon human blood which results in severe itching. Nits are very small round eggs that stick to the hair close to the scalp. Head lice can be found anywhere on the scalp, especially behind the ears and just above the hairline along the nape of the neck. Occasionally head lice may be found in the moustache, beard, eyelashes and eyebrows.

Who gets pediculosis?

Anyone can become infested with head lice under suitable conditions of exposure regardless of age, sex, race, or standards of personal hygiene. Head lice are most common in children. Head lice infestations are found frequently in home, child care, school, or institutional settings.

How is pediculosis transmitted?

Head lice cannot jump or fly. Head-to-head contact or sharing of personal items (such as combs, brushes, hats, scarves, jackets, sweaters, sheets, pillows, mattresses, sleeping bags, blankets, bedding, car seats, or upholstered furniture) of a person with head lice may result in transmission from one individual to another. Lice from animals do not infest humans. They may transfer to a person for a short time but do not reproduce and do not require treatment.

What are the symptoms of pediculosis?

Usually, the first indication of an infestation is itching or scratching of the scalp where the lice feed. Scratching at the back of the head or around the ears should lead to an examination for head louse nits (eggs) on the hair. If scratching is sufficiently intense, a secondary bacterial infection may result.

How soon do symptoms appear?

It may take as long as two to three weeks or longer for a person to notice the intense itching associated with head lice infestation.

How long is a person able to spread lice?

Pediculosis can be spread as long as lice or nits remain alive on the infested person, clothing, or furniture.

What is the treatment for pediculosis?

Only persons with live lice and/or viable nits require treatment. Medicated shampoos or cream rinses with a pediculocide are used to kill head lice. Over-the-counter preparations, such as RID or NIX, are effective. Follow the package directions when using these products. Products containing lindane are available only through a physician's prescription. Lindane is not recommended for infants, young children, or pregnant or lactating women. If a lindane or pyrethrin product is used, retreatment after seven to ten days is recommended to assure that no eggs have survived. Nit combs or solutions to soften nit glue are available to help remove nits from the hair. Nit removal with a nit comb is recommended to insure adequate treatment. Nit removal can be the sole treatment (i.e., no medication) for infants under one year, pregnant or nursing women, and those individuals with eyelash or eyebrow infestations.

What can be done to prevent the spread of pediculosis?

- Avoid head-to-head contact with infested individuals and their belongings (especially headgear, combs and brushes, clothing, and bedding).
- Household members, close contacts, and playmates of infested individuals should be examined and treated if live lice or nits are found.
- Infested persons in school and child care are to be excluded until they have been treated and found to be free of nits.
- Thorough cleaning of household items is recommended including: vacuuming upholstered furniture and carpets; machine wash washable clothing in hot (130° F) water, and dry in hot dryer for at least ten minutes (if clothes are clean, just place in hot dryer). Environmental spraying is not recommended. Dry cleaning is effective for non-washable clothing and pillows.
- Combs and hair brushes can be washed with a pediculocide shampoo or soaked in hot water (130°F).
- Where large scale infestations involve several families, the importance of coordination of treatment and prevention efforts is important.

Missouri Department of Health
Section of Communicable Disease Control and Veterinary Public Health
Phone (800) 392-0272

OUTBREAK REPORTING FORM

ID: ____ OUTBREAK NAME: _____ ENTRY DATE: ___/___/___

REPORT DATE: ___/___/____ PERSON RECEIVING REPORT (initials): __ __

REPORTED BY: (circle 2-digit code)

01	Local Health Dept.	07	School/College
02	District Office	08	Industry/Worksite
03	Hospital	09	Private Physician/Health Care Provider
04	Laboratory (non-hospital lab)	10	Private Citizen
05	Nursing Home/Long Term Care	11	Other State Agency
06	Child Care	12	Other, specify _____

DATE OF REPORT TO LOCAL HEALTH AGENCY: ___/___/____

PROBLEM DESCRIPTION: (circle 2-digit code)

01	Outbreak or possible outbreak	04	Cluster of Events
02	Case Report	05	Sensitive Event
03	Toxic Exposure	06	Artifact (false alarm)
		07	Other, specify _____

CRITICAL EVENT DATE: ___/___/___

Number of persons reported ill: __ __, __ __ __

Number of reported deaths __, __ __ __

Estimated number of persons exposed/at risk __ __ __, __ __ __

SUSPECTED LOCATION OF EXPOSURE:
if in-state, County: _____

if out of state , Check here: ❑ if out of country, Check here: ❑

Specify suspected state and county if known or country of exposure _____

GENERAL CATEGORY: (circle 2-digit code)

01	Infectious Disease	05	Environmental Hazard (noninfectious)
02	Special Syndrome (Reye, Kawasaki, GBS)	06	Occupational Hazard (noninfectious)
03	Injury/Trauma	08	Other, specify: _____
04	Chronic Disease	09	Unknown

SUSPECT MODE OF TRANSMISSION: (circle 2-digit code)

01	Food	04	Air	07	Environmental Exposure
02	Water	05	Person to person	08	Worksite Exposure
03	Vector	06	Medical Procedure/ Medication	09	Other, specify _____

What is the specific suspect vehicle or vector?_____

If a commercial product is suspected, specify: _____

EXPOSURE SETTING/POPULATION AT RISK: (circle 2-digit code)

01	Camp	10	Military Base/Camp
02	Childcare	11	Nursing Home/Long Term Care
03	Church/Temple	12	Occupational/Workplace
04	Club/Health Spa	13	Prison
05	Disaster (natural or man-made)	14	Resort/Hotel
06	General Community	15	Restaurant/Food Service
07	Home/Private Gathering	16	School/College
08	Hospital/Clinic/Medical Care Site	17	Catered Event
09	Immigrant/Alien	88	Other, specify _____
		99	Unknown

SPECIFIC CAUSE: (circle 3-digit code)

151	AGI *	048	Hepatitis, NANB	105	Rheumatic Fever
056	AIDS	012	Hepatitis, (unspecified)	025	Rocky Mtn. spotted fever
104	Amebiasis	106	Influenza	020	Rubella
217	ARI **	049	Legionellosis	100	Salmonella,serotype:___
001	Aseptic Meningitis	038	Hansen Disease (Leprosy)		_____
152	Bacillus Cereus	039	Leptospirosis	225	Scabies
053	Botulism, foodborne	158	Listeriosis	160	Scombrotoxin
002	Brucellosis	108	Lyme disease	101	Shigellosis
102	Campylobacteriosis	013	Malaria	200	Silicosis
003	Chickenpox	050	Measles (indigenous)	161	S. Aureus
153	Ciguatoxin	051	Measles (imported)	219	S. Aureus - MRSA***
154	C. perfringens	016	Meningococcal infection	162	Strep group A
155	Cryptosporidiosis	018	Mumps	032	Syphilis
004	Diphtheria	019	Pertussis	021	Tetanus
156	E. coli 0157:H7	044	Plague	052	Toxic Shock Syndrome
005	Encephalitis, primary	041	Polio, (paralytic)	027	Trichinosis
218	Fifth Disease	045	Psittacosis	022	Tuberculosis
157	Giardiasis	159	Pseudomonas	023	Tularemia
029	Gonorrhea	034	Rabies (animal)	024	Typhoid Fever
011	Hepatitis A	046	Rabies (human)	026	Typhus (murine)
010	Hepatitis B	103	Reye Syndrome	047	V. cholerae -01
				226	V. cholerae non-01
				163	V. parahaemolyticus
201	Spinal Cord Injury	222	Liver Cancer	215	Tobacco Abuse
202	Head Injury	209	Lung Cancer	216	Other Substance Abuse
204	Motor Vehicle	223	Leukemia		
205	Suicide	210	Diabetes mellitus		
206	Other Injury	211	Other Chronic Disease		
221	Bone Cancer	212	Birth Defects		
207	Breast Cancer	213	Other Perinatal		
208	Cervical Cancer	214	Alcohol Abuse		

* Acute Gastrointestinal Illness of unknown etiology
** Acute Respiratory Illness of unknown etiology
*** Methicillin Resistant S. aureus

220 Multiple Cancers, specify _____
Suspected exposure leading to multiple cancers _____
224 Other Cancer, specify _____
777 Environmental hazard or toxin, specify _____
888 Other, specify _____
999 Unknown

LEVEL OF INVESTIGATION:

01	Received report
02	Handled by other person/office/agency
03	Consultation provided by phone or mail
04	Onsite visit or assistance
05	Primary responsibility for investigation

LEVEL OF INVESTIGATION BY LOCAL AGENCY:

01	Received report
02	Handled by other person/office/agency
03	Consultation provided by phone or mail
04	Onsite visit or assistance
05	Primary responsibility for investigation
06	Referred to district office

STATUS OF REPORT: Check one: Provisional ☐ Final ☐

BUREAU _____ DISTRICT ____ FINAL REPORT _____
Date